EPA REGION 8 QA DOCUMENT REVIEW CROSSWALK

QAPP/FSP/SAP for: *(check appropriate box)*	**Entity** *(grantee, contractor, EPA AO, EPA Program, Other)*	**Regulatory Authority EPA and/or Funding Mechanism**	___ **40 CFR 31 for Grants** ___ **48 CFR Part 46 for Contracts** _X_ **Interagency Agreement** ___ **EPA Administrative Order** ___ **EPA Program Funding** ___ **EPA Program Regulation** ___ **EPA CIO 2105**
___ **GRANTEE** ___ **CONTRACTOR** ___ **EPA** **X** **Other**	U.S. Army Corps of Engineers, 1616 Capital Avenue, Omaha, NE 68102		
Document Title *[Note: Title will be repeated in Header]*	QAPP, Review and Organization of Existing Environmental Data for Upper Animas Mining District, San Juan County, Colorado		
QAPP/FSP/SAP Preparer	CB&I Federal Services LLC		
Period of Performance *(of QAPP/FSP/SAP)*	**May 7, 2015 to November 13, 2015**	**Date Submitted for Review**	June 1, 2015
EPA Project Officer **EPA Project Manager**	Paula Schmittdiel, Remedial Project Manager, EPA	**PO Phone #** **PM Phone #**	303-312-6861
QA Program Reviewer or Approving Official	Christopher Fassero, Project Manager, USACE; 402-995-2679	**Date of Review**	June 15, 2015

Documents to Review:

1. QAPP written by Grantee or EPA must also include for review:
   Work Plan (WP) / Statement of Work (SOW) / Program Plan (PP) / Research Proposal (RP)

2. QAPP written by Contractor must also include for review:
   a) Copy of signed QARF for Task Order
   b) Copy of Task Order SOW
   c) Made available hard or electronic copy of approved QMP
   d) If QMP not approved, provide Contract SOW

3. For a Field Sampling Plan (FSP) or Sampling & Analyses Plan (SAP), the Project QAPP must also be provided.
   OR
   The FSP or SAP must be clearly identified as a stand-alone QA document and must contain all QAPP required elements (Project Management, Data Generation/Acquisition, Assessment and Oversight, and Data Validation and Usability).

Documents Submitted for QAPP Review:

1. **QA Document(s) submitted for review:**

QA Document	Document Date	Document Stand-alone	Document with QAPP
QAPP		Yes / No	
FSP		Yes / No	Yes / No
SAP		Yes / No	Yes / No
SOP(s)			Yes / No

2. **WP/SOW/TO/PP/RP Date** _____
   WP/SOW/TO/RP Performance Period _____
3. **QA document consistent with the:**
   WP/SOW/PP for grants? Yes / No
   SOW/TO for contracts? Yes / No
4. **QARF signed by R8 QAM** Yes / No / NA
   Funding Mechanism IA
   Amount _____

Summary of Comments *(highlight significant concerns/issues)*:

1. Comment #1 The EPA Crosswalk form and the Transmittal letter should be separate documents from the QAPP.
2. Comment #2
3. Comment #3
4. **The** U.S. Army Corps of Engineers, 1616 Capital Avenue, Omaha, NE 68102 **must address the comments in the Summary of Comments, as well as those identified in the Comment section(s) that includes a "Response (date)" and Resolved (date)".**

Comment [VJ1]: EPA QUESTION: Is this the correct date for the POP?
CB&I RESPONSE: The correct POP is from May 7, 2015 to November 13, 2015.

Comment [VJ2]: EPA COMMENTS: A copy of the IA SOW should also be included with the Submittal of the final QAPP.
One of these should be submitted.
CB&I RESPONSE: The Performance Work Statement (PWS) has been included as Appendix A in the final QAPP.

Comment [VJ3]: EPA COMMENT: These have not been submitted with the QAPP at time of review.
CB&I RESPONSE: The Performance Work Statement (PWS) has been included as Appendix A in the final QAPP.

Comment [VJ4]: EPA COMMENT: The QARF is a requirement when EPA is doing the contracting. As for QMP, please reference the EPA approved USACE QMP. CB&I's QMP can include EPA requirements found in the R8 QA guidance on QMPs as well as any USACE requirements. These items can be submitted as one amendment to the approved QAPP when they are available. A copy of the SOW for the USACE task order should be submitted with the final QAPP submittal for a complete record.
CB&I RESPONSE: The EPA approved USACE QMP has been referenced in the Introduction (page 1) and added to the References (page 1_).

Comment [VJ5]: EPA COMMENT: OK on 2nd submittal [i.e., final QAPP can include crosswalk as an appendix].

Element	Acceptable *Yes/No/NA*	Page/ Section	Comments
A. Project Management			
A1. Title and Approval Sheet			
a. Contains project title	Yes	Pg 2	Also on first page (cover), not numbered - Site Name should be "Upper Animas Mining District", It is confusing to have some signatures on the cover page and others on Work sheet #1 – can they be combined? The Project name on page 2 should include the site name – Upper Animas Mining District. If b/c of the contracting-IA documents, this is not possible, then the Upper Animas Mining District should be listed in parentheses on title page and header. The signature block has been removed from the cover page and all signatures are included on WS#1. Site name has been changed to Animas River Mining District as requested, in title and in several text occurrences.
b. Date and revision number line (for when needed)	Yes	*	*Revision / date are in the document header No action required.
c. Indicates organization's name	Yes	Pg 2	This is not clear on page 2 – which organization is named. Page 2 (WS#1/#2) now indicates organization name and position title above each signature line.
d. Date and signature line for organization's project manager	Yes	Pg 2	The actual name, and title for each signatory should be provided in the signature block for each organization's approving official. Same response as for A1.c above.
e. Date and signature line for organization's QA manager	Yes	Pg 2	Same comment as d. above. Same response as for A1.c above.
f. Other date and signatures lines, as needed	NA	Pg 2	
A2. Table of Contents			
a. Lists QA Project Plan information sections	Yes	Pg i	
b. Document control information indicated	Yes	*	*Document control number is stated on cover page (not numbered) No action required.
A3. Distribution List			
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization	Yes	Pg 6	Should also include Elizabeth Fagan, EPA Remedial Project Manager for distribution. This chart is confusing b/c it is trying to fulfill 2 purposes. Elizabeth Fagan, RPM has been added to the chart, which satisfies requirements of the WS.
A4. Project/Task Organization			

a. Identifies key individuals involved in all major aspects of the project, including contractors	NO	Pg 7	CB&I's response says a Data Manager will be designated but the organization chart does not say who that will be. Please provide the page # in the QAPP. CB&I has identified Barbara Matz as the Data Manager, and have added her name to the organization chart on page 7.
b. Discusses their responsibilities	Yes	Pg 7	
c. Project QA Manager position indicates independence from unit generating data	Yes	Pg 7	Based on the table on page 7, the independence of the QC (or is it QA?) manager is not clear. The Org Chart has been modified to separate Oversight, including the Quality Manager, from Data Evaluation.
d. Identifies individual responsible for maintaining the official, approved QA Project Plan	Yes	Pg 7 Pg 9	Maintenance of the QAPP a role of the Project QC Manager (p 7). Review and approval are provided by EPA, via the PM (p 9) It is not clear who with the contractor is responsible for maintaining the approved QAPP – perhaps a phrase can be added to Mr. Flynn's description. "maintains the approved QAPP." has been added to Mr. Flynn's description on page 9.
e. Organizational chart shows lines of authority and reporting responsibilities	Yes	Pg 6	
A5. Problem Definition/Background			
a. States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained	Yes	Section 11	
b. Clearly explains the reason (site background or historical context) for initiating this project	Yes	Pg 1 Sec. 11	
c. Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project	NA	NA	
A6. Project/Task Description			
a. Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the project's goals	Yes	Sec. 11 Appendix A	Only shows a portion of the documents/data that may be available. This is the list of documents known at time of QAPP creation. Additional documents will be added to the list as they are found.
b. Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments	Yes	Sec. 14.1	
c. Details geographical locations to be studied, including maps where possible	Yes	Figure 1	
d. Discusses resource and time constraints, if applicable	Yes	Sec. 11.4	
A7. Quality Objectives and Criteria			

a. Identifies - performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, - including project action limits and laboratory detection limits and - range of anticipated concentrations of each parameter of interest	Yes	Sec. 11.6	
b. Discusses precision	NA	NA	
c. Addresses bias	NA	NA	
d. Discusses representativeness	NA	NA	
e. Identifies the need for completeness	Yes	Appendix B	Document Evaluation Checklist, Page 2 of 2 No action required.
f. Describes the need for comparability	NA	NA	
g. Discusses desired method sensitivity	NA	NA	
A8. Special Training/Certifications			
a. Identifies any project personnel specialized training or certifications	Yes	Pg 7	
b. Discusses how this training will be provided	NA	NA	
c. Indicates personnel responsible for assuring training/certifications are satisfied	NA	NA	
d. identifies where this information is documented	NA	NA	
A9. Documentation and Records			
a. Identifies report format and summarizes all data report package information	Yes	Appendix B	Document Evaluation Checklist, Page 1 of 2 No action required.
b. Lists all other project documents, records, and electronic files that will be produced	Yes	Sec. 14.1 Sec 29	
c. Identifies where project information should be kept and for how long	Yes	Pg 14	The length of time that project information will be kept should be stated. All files will be provided to EPA as electronic attachment to Final Deliverable.
d. Discusses back up plans for records stored electronically	Yes	Pg 14	Since most records are stored electronically, if those records were not obtained from EPA records center, then, how and where these records would be stored (or provided to EPA) should be dicussed. All files will be provided to EPA as electronic attachment to Final Deliverable.

e. States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this	NA	NA	
B. Data Generation/Acquisition			
B1. Sampling Process Design (Experimental Design)			
a. Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample	NA	NA	
b. Details the type and total number of sample types/matrix or test runs/trials expected and needed	NA	NA	
c. Indicates where samples should be taken, how sites will be identified/located	NA	NA	
d. Discusses what to do if sampling sites become inaccessible	NA	NA	
e. Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.	NA	NA	
f. Specifies what information is critical and what is for informational purposes only	NA	NA	
g. Identifies sources of variability and how this variability should be reconciled with project information	NA	NA	
B2. Sampling Methods			
a. Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken	NA	NA	
b. Indicates how each sample/matrix type should be collected	NA	NA	
c. If in situ monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data	NA	NA	
d. If continuous monitoring, indicates averaging time and how instruments should store and maintain raw data, or data averages	NA	NA	
e. Indicates how samples are to be homogenized, composited, split, or filtered, if needed	NA	NA	
f. Indicates what sample containers and sample volumes should be used	NA	NA	

g. Identifies whether samples should be preserved and indicates methods that should be followed	NA	NA	
h. Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of	NA	NA	
i. Identifies any equipment and support facilities needed	NA	NA	
j. Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented	NA	NA	
B3. Sample Handling and Custody			
a. States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the maximum time before retrieval of information	NA	NA	
b. Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)	NA	NA	
c. Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible	NA	NA	
d. Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan	NA	NA	
e. Identifies chain-of-custody procedures and includes form to track custody	NA	NA	
B4. Analytical Methods			
a. Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures	NA	NA	
b. Identifies equipment or instrumentation needed	NA	NA	
c. Specifies any specific method performance criteria	NA	NA	
d. Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation	NA	NA	

e. Identifies sample disposal procedures	NA	NA	
f. Specifies laboratory turnaround times needed	NA	NA	
g. Provides method validation information and SOPs for nonstandard methods	NA	NA	
B5. Quality Control			
a. For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency	NA	NA	
b. Details what should be done when control limits are exceeded, and how effectiveness of control actions will be determined and documented	NA	NA	
c. Identifies procedures and formulas for calculating applicable QC statistics, for example, for precision, bias, outliers and missing data	NA	NA	
B6. Instrument/Equipment Testing, Inspection, and Maintenance			
a. Identifies field and laboratory equipment needing periodic maintenance, and the schedule for this	NA	NA	
b. Identifies testing criteria	NA	NA	
c. Notes availability and location of spare parts	NA	NA	
d. Indicates procedures in place for inspecting equipment before usage	NA	NA	
e. Identifies individual(s) responsible for testing, inspection and maintenance	NA	NA	
f. Indicates how deficiencies found should be resolved, re-inspections performed, and effectiveness of corrective action determined and documented	NA	NA	
B7. Instrument/Equipment Calibration and Frequency			
a. Identifies equipment, tools, and instruments that should be calibrated and the frequency for this calibration	NA	NA	
b. Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment	NA	NA	
c. Identifies how deficiencies should be resolved and documented	NA	NA	
B8. Inspection/Acceptance for Supplies and Consumables			

a. Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials	NA	NA	
b. Identifies the individual(s) responsible for this	NA	NA	
B9. Use of Existing Data (Non-direct Measurements)			
a. Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used	NA	NA	
b. Describes the intended use of this information and the rationale for their selection, i.e., its relevance to project	NA	NA	
c. Indicates the acceptance criteria for these data sources and/or models	NA	NA	
d. Identifies key resources/support facilities needed	NA	NA	
e. Describes how limits to validity and operating conditions should be determined, for example, internal checks of the program and Beta testing	NA	NA	
B10. Data Management			
a. Describes data management scheme from field to final use and storage	NA	NA	
b. Discusses standard record-keeping and tracking practices, and the document control system or cites other written documentation such as SOPs	Yes	NA	The QAPP should discuss some sort of system to track the compilation of data and documents – the organization and document tracking system. A database will be created and maintained to list documents obtained and evaluation ranking of those reviewed.
c. Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately	NA	NA	
d. Identifies individual(s) responsible for this	NO	Page 7	The QAPP should identify the key person responsible for organizing the records and documents reviewed for this work. A Data Manager will be designated. QAPP does not name who the person will be in the Org chart. Barbara Matz will be the CB&I Data Manager, and has been identified in the organization chart on page 7.
e. Describes the process for data archival and retrieval	NA	NA	
f. Describes procedures to demonstrate acceptability of hardware and software configurations	NA	NA	
g. Attaches checklists and forms that should be used	Yes	NA	The Document Evaluation Checklist should be referred to. It is referenced at various places in the text.

C. Assessment and Oversight			
C1. Assessments and Response Actions			
a. Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates	Yes	NA	During the course of the review, there should be some oversight of the work and assessment activity to ensure that all project workers are following the same protocols. This can be a fairly simple description. The revised Org Chart breaks CB&I project staff into oversight and data evaluation groups.
b. Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process	Yes	NA	See comment in a. above. See response to C1.a above
c. Describes how and to whom assessment information should be reported	No	Page 10	Should this be the responsibility of the QC manager? Information obtained by data evaluation staff will be reported to project oversight personnel. The QAPP should specify who in Oversight is the responsible person and reference in the column to the left the page/worksheet where it is addressed. CB&I Project Manager, David Cacciatore, is responsible for all reporting to USACE and EPA oversight personnel, as indicated in the worksheet on page 10.
d. Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented	Yes	NA	According to the work sheet #6 on page 9, the QC manager is responsible for corrective action. NOTE – There are a number of places in the QAPP where Mr. Flynn's position isn't consistent – in some places he is a QC manager and in the org chart, he is listed as a QA manager. Please clarify. Mr. Flynn's title is Quality Manager – this has been corrected in the worksheets.
C2. Reports to Management			
a. Identifies what project QA status reports are needed and how frequently	Yes	NA	This can be as simple as the biweekly conference calls with EPA and USACE or a simple email. Added to Section 14.2: "Throughout the duration of the project, bi-weekly status reports will be provided in a conference call or by electronic mail if a call is not held."
b. Identifies who should write these reports and who should receive this information	Yes	NA	Per comment in a. above. Also added to Section 14.2: "The status reports will be prepared by the PM and transmitted to the RPM."

D. Data Validation and Usability			
D1. Data Review, Verification, and Validation			
Describes criteria that should be used for accepting, rejecting, or qualifying project data	NA	NA	
D2. Verification and Validation Methods			
a. Describes process for data verification and validation, providing SOPs and indicating what data validation software should be used, if any	NA	NA	
b. Identifies who is responsible for verifying and validating different components of the project data/information, for example, chain-of-custody forms, receipt logs, calibration information, etc.	NA	NA	
c. Identifies issue resolution process, and method and individual responsible for conveying these results to data users	NA	NA	
d. Attaches checklists, forms, and calculations	NA	NA	
D3. Reconciliation with User Requirements			
a. Describes procedures to evaluate the uncertainty of the validated data	NA	NA	
b. Describes how limitations on data use should be reported to the data users	NA	NA	